

WHAT IS CLAIMED IS:

Claim 1.

A oligosaccharide synthesizer comprising:
a container for storing buffer solution;
5 a pump for feeding buffer solution;
a sample injector further comprising a container
for storing a sugar nucleotide solution and a
container for storing glycosyltransferase, said buffer
solution used to mix said sugar nucleotide solution
10 and said glycosyltransferase and to inject the mixture
into a flow path for feeding said buffer solution;
a reaction tank where a primer is immobilized,
said tank used for reaction between solution injected
out of said sample injector and said primer;
15 an ultrafiltration column for separating said
glycosyltransferase from sugar nucleotide and
nucleotide; and
a collection flow path for feeding said
glycosyltransferase flowing out of said
20 ultrafiltration column, into the container for storing
glycosyltransferase of said sample injector.

Claim 2.

A oligosaccharide synthesizer comprising:
a plurality of said containers for storing buffer
25 solution;

a plurality of said collection flow paths provided in response to the number of said containers for storing buffer solution; and

5 a collection flow path switch valve for feeding the solution coming out of said ultrafiltration column into one of said collection flow paths.

Claim 3.

The oligosaccharide synthesizer according to Claim 1 comprising:

10 said container for storing buffer solution;
said pump;
said reaction tank; and

a circulating flow path switch valve arranged between said ultrafiltration columns in order to
15 switch between the flow paths of various sections;

said circulating flow path switch valve characterized by switching between a first flow path for circulation through the reaction tank, circulating flow path switch valve, pump, sample injector and
20 reaction tank; and a second flow path for circulation through the buffer solution container, circulating flow path switch valve, pump, sample injector, reaction tank and ultrafiltration column.

Claim 4.

25 A oligosaccharide synthesizer comprising:

a container for storing buffer solution;
a pump for feeding buffer solution;
a sample injector further comprising:
a container for storing a sugar nucleotide

5 solution,

a container for storing a primer, and

a mixing tank for mixing the sugar nucleotide
solution with said primer; wherein the solution mixed
by said mixing tank being injected into the flow path
10 for feeding said buffer solution by said sample
injector;

a reaction tank where a primer is immobilized,
said tank used for reaction between solution injected
out of said sample injector and said primer;

15 an ultrafiltration column for separating said
primer from sugar nucleotide and nucleotide or
oligosaccharide;

a first flow path for feeding the primer coming
out of the ultrafiltration column, into the primer
20 container of said sample injector; and

a second flow path for feeding the sugar
nucleotide and nucleotide or oligosaccharide coming
out of the ultrafiltration column, into a drain.

Claim 5.

25 The oligosaccharide synthesizer according to Claim

4 comprising:

a plurality of said reaction columns,

a switch valve arranged between a plurality of
said reaction columns in order to feed the solution
5 injected out of said sample injector, into any one of
the reaction columns.

Claim 6.

The oligosaccharide synthesizer according to Claim
5 characterized in that an enzyme releasing
10 oligosaccharide form said primer is immobilized on one
of said reaction columns.

Claim 7.

The oligosaccharide synthesizer according to Claim
6 characterized in that, after solution has passed
15 through the reaction column where said oligosaccharide
release enzyme is immobilized, a oligosaccharide is
collected from said drain.